

## **Ferree, Melissa A. (DNREC)**

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**From:** JAnthony, Karen (DNREC)  
**Sent:** Friday, July 11, 2014 8:37 AM  
**To:** Bryan Horsey  
**Cc:** Mattio, Karen (DNREC); French, Joanna (DNREC); Ferree, Melissa A. (DNREC); Crofts, Marjorie A. (DNREC); Mirzakhilili, Ali (DNREC); Foster, Paul (DNREC); Marker, Nancy C. (DNREC)  
**Subject:** RE: Sulfur and Bloom

Dear Mr. Horsey:

Thank you in advance for your cooperation in addressing questions from the Solid and Hazardous Waste Management Section (SHWMS) with regard to spent sorbents generated via the natural gas desulfurization process. It is the understanding of the SHWMS that once the sorbents become spent, Bloom Energy arranges after use management based on the sorbents having a non-hazardous waste status. Please submit to the SHWMS the contact information for the designated facility managing the spent sorbents, the management method of the same, the physical properties of the spent waste, along with any analytical data used in concluding the spent sorbents do not meet the definition of hazardous waste as set forth in Delaware's *Regulations Governing Hazardous Waste*. The SHWMS appreciates your expeditious response to this request, and looks forward to receiving the information within the next ten calendar days.

Should you have any questions, I am available via email or by telephone, 302.739.9403, Option 8.

Sincerely,

Karen J'Anthony

Karen G. J'Anthony  
Environmental Program Manager  
DNREC Division of Waste and Hazardous Substances  
Solid and Hazardous Waste Management Section  
Telephone: 302.739.9403, Option 8  
Fax: 302.739.5060  
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**From:** Foster, Paul (DNREC)  
**Sent:** Wednesday, July 09, 2014 11:17 AM  
**To:** Mirzakhilili, Ali (DNREC); Crofts, Marjorie A. (DNREC); Ferree, Melissa A. (DNREC); JAnthony, Karen (DNREC)  
**Cc:** Mattio, Karen (DNREC); French, Joanna (DNREC); Bryan Horsey  
**Subject:** RE: Sulfur and Bloom

As an addendum to my email yesterday, I have been in contact with Bryan Horsey of Bloom Energy and he has offered to answer any and all questions about the sulfur removal system that they use. I have copied him and his email is above.

Paul

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**From:** Foster, Paul (DNREC)  
**Sent:** Tuesday, July 08, 2014 1:09 PM  
**To:** Mirzakhilili, Ali (DNREC); Crofts, Marjorie A. (DNREC); Ferree, Melissa A. (DNREC); JAnthony, Karen (DNREC); Lutrzykowski, Mark J. (DNREC)

**Cc:** Mattio, Karen (DNREC); French, Joanna (DNREC)

**Subject:** Sulfur and Bloom

Ali et al,

Bloom energy uses an adsorber system to remove sulfur. The output from this process equipment is generally less than 0.1 ppm sulfur species but they have used 1 ppm as the basis for their air permit applications. Since it's process equipment necessary to prevent fouling it's not a pollution control device and we really don't have a lot of information about it. The attached paper is one sent to us from Bloom about the sulfur removal. We don't have information about the content of the adsorber media once it is spent.

Paul Foster